U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION III
CLEAN WATER ACT
COMPLIANCE INSPECTION REPORT

for

Name of Facility: University of Maryland – College Park Campus
Facility Address: 1101 Main Administration Building, 7901 Regents Drive, College Park, MD 20742
Mailing Address: Seneca Building, 4716 Pontiac Street, Suite 0103, College Park, MD 20742

Report Prepared on: June 25, 2021 (*Date*) By: _____, PG Environmental Scientist (PG Environmental) (*Signature*)

Report Final as of: July 27, 2021 (*Date*) By: MARK ZOLANDZ Digitally signed by MARK ZOLANDZ Date: 2021.07.27 10:47:02 -04'00' (*Signature*), EPA

General Information

Type of Inspection:	Compliance Evaluation Inspection (non-contact cooling water, boiler blowdown, condensate, and stormwater discharges)
Owner:	University of Maryland
Operator:	University of Maryland
Permittee:	University of Maryland
NPDES Permit No:	MD0063801
NPDES Permit Effective Date:	November 1, 2012
NPDES Permit Expiration Date:	October 31, 2017 (administratively extended)
Receiving Water:	Paint Branch and associated tributaries (including Campus Creek and Guilford Run); eventually to Northeast Branch Anacostia River
Latitude and Longitude:	38.989197 N, 76.945785 W

On-Site Facility Inspection Overview

On May 20, 2021, representatives from U.S. Environmental Protection Agency (EPA) Region III and EPA's contract inspector, PG Environmental, (hereinafter referred to the EPA Inspection Team) inspected the University of Maryland's College Park Campus (hereinafter, UMD or campus) in College Park, Maryland for discharges associated with non-contact cooling water, boiler blowdown, condensate, and stormwater. At the time of the inspection, UMD was identified as the Permittee and operator of the campus. The EPA Inspection Team was joined on the inspection by a representative from the Maryland Department of the Environment (MDE).

Approximate Entry Time: 9:30 AM (EDT) **Approximate Exit Time:** 1:55 PM (EDT)

Unique Project Identifier (UPI): 3E21WN104A

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I. INTRODUCTION

On May 20, 2021, representatives from U.S. Environmental Protection Agency (EPA) Region III and EPA's contract inspector, PG Environmental, (hereinafter referred to the EPA Inspection Team) inspected the University of Maryland's College Park Campus (hereinafter, UMD or campus) in College Park, Maryland for discharges associated with non-contact cooling water, boiler blowdown, condensate, and stormwater. At the time of the inspection, UMD was identified as the Permittee and operator of the campus. The EPA Inspection Team was joined on the inspection by a representative from the Maryland Department of the Environment (MDE). The primary purpose of the inspection was to review the accuracy and reliability of UMD's self-monitoring and reporting program as well as the general condition and status of permitted outfalls. The weather at the time of the inspection was sunny and warm, with no precipitation.

Various buildings and operations on the campus discharge non-contact cooling water, boiler blowdown, condensate, and stormwater through 12 permitted outfalls to Paint Branch and its various tributaries, including Campus Creek and Guilford Run. UMD representatives noted at the time of the inspection that a 13th outfall, Outfall 017, was not an actual outfall and does not discharge. They also explained that Outfalls 001 and 018 do not regularly flow and they believed Outfall 018 was only connected to a single sump pump, which would not necessarily be a covered discharge under the Permit. Campus drainage area and outfall maps are included in Appendix B, Exhibit 1.

The primary sources of treatment on campus related to the permitted outfalls were stormwater best management practices (BMPs) and, in some cases, oil/water separators (OWSs), which are installed mostly at parking garages and the Central Heating Plant (CHP; not all OWSs are in permitted areas). According to the flow diagram in UMD's application for permit renewal (MDE Form 2C), submitted in 2017, the municipal water supply is treated through carbon filters and pH adjusted prior to entering the boilers at the CHP (refer to Appendix B, Exhibit 2). The application was reviewed following the inspection and was not discussed in detail with UMD representatives onsite.

Non-contact cooling water, boiler blowdown, and condensate discharges at the campus are regulated under National Pollutant Discharge Elimination System (NPDES) Permit No. MD0063801 (hereinafter, Permit), which became effective on November 1, 2012, and has been administratively extended since October 31, 2017 (refer to Attachment C). The Permit allows for stormwater discharges from Permit-regulated outfalls; however, regulations related to stormwater management and pollution prevention on campus are primarily contained in UMD's municipal separate storm sewer system (MS4) permit and its permit for industrial stormwater discharges.

Observation 1. The 12 active permitted outfall locations also discharge runoff from sources and areas covered under UMD's MS4 and industrial stormwater programs. UMD representatives explained that issues observed at the outfalls may not be regulated under NPDES Permit No. MD0063801 and need to be investigated to determine which of the campus's permits is applicable. They stated that they have had a number of issues at Permit-regulated outfalls related to sediment and pollutant discharges from construction sites, which would fall under the MS4 program.

II. INSPECTION PROCESS

Inspection Opening Conference

The EPA Inspection Team arrived on campus at 9:30 a.m. (EDT) for the inspection. Jake Albright of PG Environmental displayed his Clean Water Act inspector credential to UMD representatives at the outset of the inspection and explained that the purpose of the inspection was to observe compliance with the Permit. The EPA Inspection Team explained that any information that the Facility deemed to be

confidential business information ("CBI") should be identified to EPA representatives during the inspection and it would be handled as CBI according to EPA's CBI procedures. Table 1 describes the individuals that participated in the inspection.

Table 1: Inspection Attendee List

Name	Affiliation	Telephone	Email
EPA Region III Inspectors and Contractors			
Jake Albright	PG Environmental	(703) 956-1957	Jake.Albright@pgenv.com
Kaitlin McLaughlin	EPA Region III	(215) 814-2393	McLaughlin.Kaitlin@epa.gov
Maryland Department of the Environment			
Oladapo John	MDE	(443) 250-6883	oladapo.john@maryland.gov
Facility Representatives			
Maureen Kotlas, Executive Director	UMD, Department of Environmental Safety, Sustainability, & Risk	(301) 405-3960	mkotlas@umd.edu
Scott Lupin, Associate Director	UMD, Department of Environmental Safety, Sustainability, & Risk	-	-
Jason Baer. Assistant Director of Environmental Affairs	UMD, Department of Environmental Safety, Sustainability, & Risk	(301) 405-3163	jbaer123@umd.edu
Kaitlyn Peterson, Environmental Specialist, Office of Environmental Affairs	UMD, Department of Environmental Safety, Sustainability, & Risk	(301) 405-8604	Kpeter13@umd.edu

Weather and Precipitation Conditions

During the inspection, the weather was warm and sunny. National Oceanic and Atmospheric Administration (NOAA) National Weather Service precipitation data for the date of the inspection and 5 days prior are provided in the Table 2 below:

Table 2. Precipitation Data

Station Name	Date	Precipitation Amount (inches)[1]
TAKOMA PARK 0.6 NNW, MD US	05/15/2021	0.00
TAKOMA PARK 0.6 NNW, MD US	05/16/2021	0.00
TAKOMA PARK 0.6 NNW, MD US	05/17/2021	0.01
TAKOMA PARK 0.6 NNW, MD US	05/18/2021	0.00
TAKOMA PARK 0.6 NNW, MD US	05/19/2021	0.00
TAKOMA PARK 0.6 NNW, MD US	05/20/2021	0.00

Campus Site Walk

As part of the process, the EPA Inspection Team visually observed areas of the campus in the vicinity of the permitted outfalls as well as the status and condition of the outfalls themselves at the time of the inspection. The majority of regulated discharges occurring at the outfalls permitted under NPDES Permit No. MD0063801 are from boiler blowdown and condensate from the CHP and campus-wide steam delivery system. Cooling towers and chillers used to cool various buildings across campus also contribute

[1] Source: NOAA National Climatic Data Center (http://www.ncdc.noaa.gov/).

to flow at most outfalls. Most of these sources discharge into the campus's storm sewer prior to being conveyed to the outfalls.

Observation 2. UMD representatives stated that non-contact cooling water, boiler blowdown, and condensate discharges only account for a small percentage of the overall volume being discharged from the permitted outfalls (i.e., most volume is stormwater runoff). As stated previously, runoff that is regulated under the MS4 and industrial stormwater programs is also discharged from the same outfalls. UMD provided data from a study conducted in 2019 that indicate the percent of discharges considered to be from sources permitted under NPDES Permit No. MD0063801 is about 11.8% from Outfalls 002,003, 004, 005, 007, 010, 012, 014, 016, and 019 (refer to Appendix B, Exhibit 3). As noted previously, UMD representatives stated that Outfall 017 was not an actual outfall, and 001 and 018 do not regularly discharge.

The following locations were visited on the day of the inspection:

Outfall 007(approx. 11:30 a.m.)

Outfall 007 drains areas and buildings in the southeast part of campus. UMD's permit renewal application states approximately 40,708 gallons per day (GPD) of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed moisture at the outfall; the receiving water appeared clear in the vicinity of Outfall 007 (refer to Appendix A, DSCN 5027 and DSCN 5029).

Outfall 005(approx. 11:38 a.m.)

Outfall 005 drains areas and buildings, west to east, through the central portion of campus. UMD representatives stated Outfall 005 has the largest drainage area, accounting for about one third of the campus. UMD's permit renewal application states approximately 135,363 GPD of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed moisture/flow at the outfall (refer to Appendix A, DSCN 5030). The receiving water was cloudy in the vicinity of Outfall 005 (refer to Appendix A, DSCN 5030 and DSCN 5034). UMD representatives stated that the cloudiness was likely from sediment-laden runoff coming from various campus construction projects, including the School of Public Policy and the Purple Line project. UMD representatives stated they routinely identify these types of issues through the MS4 program and notify the applicable contractors; however, the issues persist. They noted that the Office of Environmental Affairs has few effective mechanisms available to escalate enforcement.

Outfall 016 (approx. 11:47 a.m.)

The outfall drains areas and buildings in a small portion of the eastern-central part of campus. The drainage area includes a portion of the CHP as well as off-campus commercial establishments (e.g., restaurant). UMD's permit renewal application states approximately 29,857 GPD of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed the receiving water appeared clear in the vicinity of Outfall 007 (refer to Appendix A, DSCN 5036).

Outfall 001 (approx. 11:55 a.m.)

The outfall drains areas and buildings in a small portion of the eastern-central part of campus. The drainage area includes an off-campus hotel. UMD's permit renewal application estimates no discharges of CHP blowdown/condensate occur at the outfall. UMD representatives stated that they sample Outfall 001 from a manhole about 650-700 feet southwest of the discharge location to avoid getting samples influenced by runoff from the hotel. The EPA Inspection Team observed the receiving water appeared clear in the vicinity of Outfall 001 (refer to Appendix A, DSCN 5041 and DSCN 5043).

Outfalls 002, 003, and 004 (approx. 12:11 p.m.)

These three outfalls drain areas and buildings in a large portion of the northern and central parts of campus. Of the three, Outfall 003 has the largest drainage area (refer to Appendix A, DSCN 5044 for a

photograph of a chiller/cooling unit in the Outfall 003 area). All three outfall structures are located on the west bank of Paint Branch in the northeastern part of campus. Outfall 004 is upstream of 003, which is upstream of 002.

UMD's permit renewal application states approximately 25,007 GPD, 154,673 GPD, and 93,108 of CHP blowdown/condensate are discharged through the Outfalls 002, 003, and 004, respectively, on average. The application also lists a remote boiler/chiller plant as a source for Outfall 004 but does not provide an estimated average daily flow.

All three outfalls had flow at the time of the inspection. In each case, the discharge appeared to be clear (refer to Appendix A, DSCN 5045, DSCN 5048 , DSCN 5053, DSCN 5054, and DSCN 5055).

Outfall 019 (approx. 12:35 p.m.)

Outfall 019 drains areas and buildings in the northern part of campus including the Eppley Recreation Center area (refer to Appendix A, DSCN 5066) and Cambridge Community area. UMD's permit renewal application states approximately 32,384 GPD of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed moisture/flow at the outfall. Red clay and sediment were observed deposited in the receiving water at the outfall and approximately 50 feet downstream (refer to Appendix A, DSCN 5058, DSCN 5059, and DSCN 5062). UMD representatives stated that the deposits were likely from sediment-laden runoff coming from a residential dorm and dining hall construction project located between the Cambridge Community area and the football stadium. UMD representatives stated they routinely identify these types of issues through the MS4 program and notify the applicable contractors; however, the issues persist. They noted that the Office of Environmental Affairs has few effective mechanisms available to escalate enforcement.

Outfall 018 (approx. 12:42 p.m.)

UMD representatives explained they believed the outfall was only connected to a single basement sump pump at the School of Public Health (refer to Appendix A, DSCN 5064). UMD's permit renewal application estimates 1,522 GPD of CHP blowdown/condensate discharges occur at the outfall on average. This seems to contradict the statement from UMD representatives that the outfall is only connected to a sump pump. It is unclear if the source had been investigated or evaluated since the permit application was submitted in 2017. The permit application was provided after the inspection and not discussed in detail with UMD representatives onsite. The EPA Inspection Team observed the outfall was obstructed by vegetation but did not appear to be discharging at the time of the inspection. (refer to Appendix A, DSCN 5064).

Outfall 010 (approx. 12:55 p.m.)

Outfall 010 drains areas and buildings in the northwest corner of campus and discharges to Campus Creek. UMD's permit renewal application states approximately 4,448 GPD of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed moisture at the outfall; the receiving water appeared clear in the vicinity of Outfall 010 (refer to Appendix A, DSCN 5067 and DSCN 5069).

Outfall 012 (approx. 1:05 p.m.)

Outfall 012 drains areas and buildings in the southwest portion of campus and discharges to Guilford Run. UMD's permit renewal application states approximately 17,207 GPD of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed moisture/flow at the outfall (refer to Appendix A, DSCN 5074). The receiving water was cloudy in the vicinity of Outfall 012 (refer to Appendix A, DSCN 5074 and DSCN 5075). UMD representatives stated that the cloudiness was likely from sediment-laden runoff coming from the Purple Line project. UMD representatives stated they routinely identify these types of issues through the MS4 program and notify the applicable contractors; however, the issues persist. They noted that the Office of Environmental Affairs has few effective mechanisms available to escalate enforcement.

Outfall 014 (approx. 1:15 p.m.)

Outfall 014 drains areas and buildings in the northwest corner of campus and discharges to Campus Creek. UMD's permit renewal application states approximately 14,722 GPD of CHP blowdown/condensate are discharged through the outfall on average. The EPA Inspection Team observed moisture/flow at the outfall; the receiving water appeared clear in the vicinity of Outfall 014 (refer to Appendix A, DSCN 5078).

Records Review

The EPA Inspection Team also conducted a records review to further evaluate the Permittee's compliance with the Permit. Most of the records and reports required by the Permit were provided electronically while the EPA Inspection team was onsite and reviewed offsite after the inspection. The following documents were reviewed:

- Maps of Drainage Areas to Permitted Outfalls
- EPA Integrated Compliance Information System (ICIS) data (second quarter 2016 through first quarter 2021)
- eDMRs (first quarter 2018 through first quarter 2021)
- UMD Noncompliance Reports (first quarter 2018 through first quarter 2021)
- Copper Mitigation Status Reports (first half of 2018 through end of 2020)
- 2017 Permit Renewal Application
- 2019 Permitted Discharge Percentage Data Study Results
- Illicit Discharge Investigation Reports (2018 through March 2021)
- CHP and Shuttle Bus Garage OWS (January 2020 through December 2020)
- UMD Stormwater Pollution Prevention Plan (2020)
- UMD Spill Prevention Control and Countermeasure Plan (2019)

Observation 3. EPA's Enforcement Compliance History Online (ECHO) database shows the campus in a state of significant noncompliance for failure to submit eDMRs between the third quarter of 2018 and the fourth quarter of 2020 (refer to Attachment B, Exhibit 4). UMD representatives stated this was an error in the database system, and they were able to provide the eDMR submittal packages uploaded to MDE's reporting system between the first quarter of 2018 and the first quarter of 2021. Due to the volume of data provided, the submittal packages have not been included in this report but will be kept on file with EPA Region III and available for review.

Observation 4. UMD's 2017 permit renewal application only provides average daily volume estimates for CHP Boiler discharges at each outfall. According to UMD representatives at the time of the inspection, there are also cooling towers and heat exchangers that can contribute to flow at most outfalls. It is unclear why these sources were not included in the application. The application was reviewed following the inspection and not discussed in detail with UMD representatives onsite.

III. SUMMARY OF OBSERVATIONS

The following section summarizes the EPA Inspection Team's observations relative to the Permit requirements, including the status of certain treatment units, operation and maintenance practices, and monitoring and reporting documentation.

Permit Observations and Effluent Exceedances

Part I.A.1 of the Permit defines effluent limitations and monitoring requirements for all permitted outfalls.

Observation 5. According to EPA's ICIS database, the campus experienced 18 effluent limit exceedances from multiple outfalls between the second quarter of 2016 and first quarter of 2021 (refer to Attachment B, Exhibit 5). Most reported exceedances were pH and total chlorine exceedances with one oil and grease exceedance (see Table 2).

Table 2. Summary of Effluent Exceedances (all outfalls; 2nd quarter 2016 through 1st quarter 2021)

Permit #	Monitoring Period End Date	Outfall No.	Parameter Name	DMR Value	Permit Limit	Units	Limit Type
MD0063801	3/31/2021	005	pH	9.09	8.5	s.u.	Daily Max.
MD0063801	3/31/2021	005	Chlorine, total residual	0.13	0.019	mg/L	Daily Max.
MD0063801	3/31/2021	016	Oil & Grease	32.3	15	mg/L	Daily Max.
MD0063801	3/31/2020	012	Chlorine, total residual	0.13	0.011	mg/L	Monthly Average
MD0063801	3/31/2020	012	Chlorine, total residual	0.27	0.019	mg/L	Daily Max.
MD0063801	12/31/2019	003	pH	8.58	8.5	s.u.	Daily Max.
MD0063801	12/31/2019	005	pH	9.11	8.5	s.u.	Daily Max.
MD0063801	6/30/2018	003	pH	9.43	8.5	s.u.	Daily Max.
MD0063801	6/30/2018	004	pH	9.46	8.5	s.u.	Daily Max.
MD0063801	12/31/2017	005	pH	8.59	8.5	s.u.	Daily Max.
MD0063801	9/30/2017	019	Chlorine, total residual	0.13	0.011	mg/L	Monthly Average
MD0063801	9/30/2017	019	Chlorine, total residual	0.27	0.019	mg/L	Daily Max.
MD0063801	3/31/2017	002	pH	<=11.1	8.5	s.u.	Daily Max.
MD0063801	6/30/2016	003	Chlorine, total residual	4.6	0.019	mg/L	Daily Max.
MD0063801	6/30/2016	004	Chlorine, total residual	14.5	0.019	mg/L	Daily Max.
MD0063801	6/30/2016	005	Chlorine, total residual	24	0.019	mg/L	Daily Max.
MD0063801	6/30/2016	014	Chlorine, total residual	1.39	0.019	mg/L	Daily Max.
MD0063801	6/30/2016	016	Chlorine, total residual	3.2	0.019	mg/L	Daily Max.

UMD representatives stated at the time of the inspection that most exceedances experienced over the 5 years prior to the inspection were the result of illicit discharges from construction sites and were ultimately regulated by the MS4 program. UMD provided noncompliance reports for 2018 through the date of inspection which reflect the onsite discussion (refer to Attachment B, Exhibit 6). It should be noted that the oil and grease exceedance experienced in the first quarter of 2021 and the chlorine exceedance experienced in the first quarter of 2020 were both thought to be anomalies or the result of laboratory error.

Observation 6. UMD provided a noncompliance report for two temperature excursions experienced in the August 2018 that were not represented in the ICIS data (refer to Attachment B,

Exhibit 6). Specifically, the report states, "During the monthly NPDES sampling event on August 30, 2018, the discharge temperature at Outfall #005 and Outfall #016 was measured at 95.2° F and 98.9° F, respectively. For Outfall #005, the upstream temperature was determined to be 92.8° F and the downstream temperature was 93.1° F. For Outfall #016, the temperature observed upstream was 86.8° F, while the downstream temperature was 92.5° F." The report also states that the excursion was investigated and found to be due to a broken steam line in the area. The line was reported to be repaired on August 30, 2018.

At the time of the inspection, UMD representatives stated that the steam generation and delivery system was aging, and UMD is currently exploring a future project on campus that will upgrade the on-campus power plant and steam system.

Part I.A.1 of the Permit states, "There shall be no discharge of floating solids or persistent foam in other than trace amounts. Persistent foam is foam that does not dissipate within one half-hour of point of discharge."

Observation 7. Cloudiness and evidence of sediment deposits were observed at multiple outfalls during the campus walk. Specifically:

- The receiving water in the vicinity of Outfall 005 was cloudy (refer to Appendix A, DSCN 5030 and DSCN 5034). UMD representatives stated that the cloudiness was likely from sediment-laden runoff coming from various campus construction projects, including the School of Public Policy and the Purple Line project.
- The EPA Inspection Team observed red clay and sediment deposited in the receiving water at Outfall 019 and approximately 50 feet downstream (refer to Appendix A, DSCN 5058, DSCN 5059, and DSCN 5062). UMD representatives stated that the deposits were likely from sediment-laden runoff coming from a residential dorm and dining hall construction project located between the Cambridge Community area and the football stadium.
- The receiving water was cloudy in the vicinity of Outfall 012 (refer to Appendix A, DSCN 5074 and DSCN 5075). UMD representatives stated that the cloudiness was likely from sediment-laden runoff coming from the Purple Line project.

UMD representatives stated they routinely identify these types of issues through the MS4 program and notify the applicable contractors; however, the issues persist. They noted that the Office of Environmental Affairs has few effective mechanisms available to escalate enforcement. UMD did provide several examples of illicit discharge reports that show issues have been identified and communicated to contractors in the past (refer to Attachment B, Exhibit 7).

Part I.U of the Permit (Compliance Schedule for Total Copper) states the following:

1. Every six months, the permittee shall submit to the Department a status report detailing current plans for meeting the Total Copper limits in Special Condition A.1. This report is due six months after the effective date of the permit and every six months thereafter until the effective date of the permit limits. The plans may include alternative treatment technologies or other discharge options which will result in compliance with the final discharge limitations.
2. Within 24 months of the effective date the permittee shall complete an Engineering Alternatives Analysis. The analysis shall review each building to identify and prioritize contributing sources and options for eliminating those sources from the storm sewer system. The permittee shall provide a copy of the analysis to the Department within 30 days of its completion.
3. Within 48 months of the effective date the permittee shall complete an Engineering Design Plan. The plan shall specify the designs of building specific corrective measures called for in the

completed Engineering Alternatives Analysis. The permittee shall provide a copy of the plan to the Department within 30 days of its completion.

4. Within 50 months of the effective date of this permit, the permittee shall complete a Compliance Plan detailing how the permittee intends to comply with the copper limits within 72 months of the effective date. The permittee must state in their plan either that the discharge will be brought into compliance or that the discharge will be eliminated, as follows:
    a. If the permittee will bring the discharge into compliance with the permit limits, the plan must detail how the permittee will reach the permit limits within 72 months of the effective date. If the permittee is eligible to have the permit limits revised, per Special Condition U.5, below, the plan must detail how the permittee will reach the revised permit limits within 72 months of the effective date.
    b. If the permittee will eliminate the discharge, the plan must state that the permittee will eliminate the discharge within 72 months of the effective date. To eliminate the discharge, the permittee must demonstrate to the Department's satisfaction that copper containing waste streams are no longer being discharged to State waters and provide supporting documents to show that the waste streams have been re-piped. This certification of discharge elimination should be done when the discharge is eliminated and no later than 72 months after the effective date.
    c. If the permittee is eligible to have the permit limits removed, per Special Condition U.5, below, the permittee is not required to submit a Compliance Plan.
5. Within 50 months of the effective date of this permit, the permittee may apply for a permit modification to revise or remove the permit limit(s) based on any combination of the following options allowed under COMAR 26.08:
    a. Site-Specific Criterion: Per COMAR 26.08.02.03-2C., the permittee shall submit to the Department complete documentation of the proposed site-specific criterion as part of the application for a permit modification.
    b. Chemical or Biological Translator: The permittee shall complete all studies supporting use of the translator under COMAR 26.08.04.02-3C, paragraphs (1), (3) and (4) for biological translators or under COMAR 26.08.04.02-4C, paragraphs (1), (3) and (4) for chemical translators and submit the results to the Department as part of the application for a permit modification.
    c. Mixing Zone Study: As part of the application for a permit modification, the permittee shall include the proposed dilution calculation and appropriate demonstration, using dye studies or simulation models, that the dilution calculation is applicable during periods of ambient stream conditions, flow rates; and distances specified in COMAR 26.08.02.05.
    d. Additional Data: As part of the application for a permit modification, the permittee may submit any new or additional data which demonstrates that there is no reasonable potential for violation of applicable water quality standards.

        Alternatives for making such a demonstration include, but are not limited to, the following:
        i. collection of effluent data using analytical methods which have lower detection levels;
        ii. collection of data using techniques designed to minimize the effects of contamination on sample results; and
        iii. collection of data utilizing alternate monitoring locations to show compliance with water quality standards.
    e. Removal of Waste Streams: The permittee must demonstrate to the Department's satisfaction that copper containing waste streams are no longer being discharged.

        Adequate demonstration to the Department should include applicable supporting documents of the re-piping of these waste streams; and appropriate certification.

Observation 8. UMD representatives stated that they have been enacting a mitigation plan and scheduling and completing significant projects to eliminate copper sources and minimize total copper exceedances throughout campus. UMD provided copper mitigation status reports from the first half of 2018 through the end of 2020 (refer to Attachment B, Exhibit 8). However, it appears the 2019 reports were inadvertently left out of the data set.

The reports indicate UMD has identified significant sources of copper and enacted projects to mitigate or eliminate them, including, but not limited to, replacing the corroded dehumidifier unit at the campus pool, replacing dated cooling towers and heat exchangers during major renovation projects, and routing sources of copper discharge from the storm sewer system to the sanitary sewer.

However, even with these projects in place, UMD representatives stated they believed they will continue to exceed the Permit's total copper limits because the total copper levels in the potable water system (provided by WSSC Water) are higher than the Permit limits.

Part I.A.1 of the Permit includes a monthly average total copper concentration limit of 9.0 ug/L and a daily maximum concentration of 13.0 ug/L. UMD representatives stated that the potable water supply, which is used as source water for the boilers and cooling towers has an average total copper concentration of 200 to 300 parts per billion (or 200 to 300 ug/L). Table 3 shows effluent total copper concentrations measured at each outfall from the first quarter of 2020 through first quarter of 2021. Data dating back to the second quarter of 2016 is available in Appendix B, Exhibit 5. These exceedances are not flagged as violations in ICIS.

Table 3. Effluent Total Copper Concentrations Measured at Each Outfall from the First Quarter of 2020 through First Quarter of 2021

Monitoring Period End Date	Outfall	Parameter	Monthly Average	Daily Max	Concentration Units
03/31/2020	001-A	Copper, total	NODI C	NODI C	ug/L
03/31/2020	002-A	Copper, total	13.53	15.5	ug/L
03/31/2020	003-A	Copper, total	13.53	15.5	ug/L
03/31/2020	004-A	Copper, total	13.53	15.5	ug/L
03/31/2020	005-A	Copper, total	13.53	15.5	ug/L
03/31/2020	007-A	Copper, total	13.53	15.5	ug/L
03/31/2020	010-A	Copper, total	13.53	15.5	ug/L
03/31/2020	012-A	Copper, total	13.53	15.5	ug/L
03/31/2020	014-A	Copper, total	13.53	15.5	ug/L
03/31/2020	016-A	Copper, total	13.53	15.5	ug/L
03/31/2020	018-A	Copper, total	NODI C	NODI C	ug/L
03/31/2020	019-A	Copper, total	13.53	15.5	ug/L
06/30/2020	001-A	Copper, total	NODI C	NODI C	ug/L
06/30/2020	002-A	Copper, total	10.2	16.3	ug/L
06/30/2020	003-A	Copper, total	10.2	16.3	ug/L
06/30/2020	004-A	Copper, total	10.2	16.3	ug/L
06/30/2020	005-A	Copper, total	10.2	16.3	ug/L
06/30/2020	007-A	Copper, total	10.2	16.3	ug/L
06/30/2020	010-A	Copper, total	10.2	16.3	ug/L
06/30/2020	012-A	Copper, total	10.2	16.3	ug/L
06/30/2020	014-A	Copper, total	10.2	16.3	ug/L
06/30/2020	016-A	Copper, total	10.2	16.3	ug/L
06/30/2020	018-A	Copper, total	NODI C	NODI C	ug/L
06/30/2020	019-A	Copper, total	10.2	16.3	ug/L
09/30/2020	001-A	Copper, total	NODI C	NODI C	ug/L
09/30/2020	002-A	Copper, total	16.8	20.7	ug/L

Monitoring Period End Date	Outfall	Parameter	Monthly Average	Daily Max	Concentration Units
09/30/2020	003-A	Copper, total	16.8	20.7	ug/L
09/30/2020	004-A	Copper, total	16.8	20.7	ug/L
09/30/2020	005-A	Copper, total	16.8	20.7	ug/L
09/30/2020	007-A	Copper, total	16.8	20.7	ug/L
09/30/2020	010-A	Copper, total	NODI C	NODI C	ug/L
09/30/2020	012-A	Copper, total	16.8	20.7	ug/L
09/30/2020	014-A	Copper, total	16.8	20.7	ug/L
09/30/2020	016-A	Copper, total	16.8	20.7	ug/L
09/30/2020	018-A	Copper, total	NODI C	NODI C	ug/L
09/30/2020	019-A	Copper, total	16.8	20.7	ug/L
12/31/2020	001-A	Copper, total	NODI C	NODI C	ug/L
12/31/2020	002-A	Copper, total	30.6	38.6	ug/L
12/31/2020	003-A	Copper, total	30.6	38.6	ug/L
12/31/2020	004-A	Copper, total	30.6	38.6	ug/L
12/31/2020	005-A	Copper, total	30.6	38.6	ug/L
12/31/2020	007-A	Copper, total	30.6	38.6	ug/L
12/31/2020	010-A	Copper, total	30.6	38.6	ug/L
12/31/2020	012-A	Copper, total	30.6	38.6	ug/L
12/31/2020	014-A	Copper, total	30.6	38.6	ug/L
12/31/2020	016-A	Copper, total	30.6	38.6	ug/L
12/31/2020	018-A	Copper, total	NODI C	NODI C	ug/L
12/31/2020	019-A	Copper, total	30.6	38.6	ug/L
03/31/2021	001-A	Copper, total	NODI C	NODI C	ug/L
03/31/2021	002-A	Copper, total	20.67	26.7	ug/L
03/31/2021	003-A	Copper, total	20.67	26.7	ug/L
03/31/2021	004-A	Copper, total	20.67	26.7	ug/L
03/31/2021	005-A	Copper, total	20.67	26.7	ug/L
03/31/2021	007-A	Copper, total	20.67	26.7	ug/L
03/31/2021	010-A	Copper, total	20.67	26.7	ug/L
03/31/2021	012-A	Copper, total	20.67	26.7	ug/L
03/31/2021	014-A	Copper, total	20.67	26.7	ug/L
03/31/2021	016-A	Copper, total	20.67	26.7	ug/L
03/31/2021	018-A	Copper, total	NODI C	NODI C	ug/L
03/31/2021	019-A	Copper, total	20.67	26.7	ug/L

Part I.P.1 of the Permit states, "The permittee shall inspect all oil-water separators, grease interceptors, and grit traps on a monthly basis to confirm that they are operating properly."

Observation 9. UMD representatives stated that OWSs located at the CHP and the shuttle bus garage are in areas covered under the Permit. Records provided by UMD show that OWS inspections are not always being conducted monthly as required by the permit (refer to Attachment B, Exhibit 9). Specifically, during 2020, the two OWSs at the shuttle bus garage were not inspected in April, May, September, October, November, or December.

The CHP has three OWSs (air compressor, underground, and fuel oil dike). The following inspection gaps were observed in 2020:

- Underground and Fuel Oil Dike OWSs were not inspected between January 30, 2020 and April 3, 2020.
- No inspections were conducted in November 2020 (gap between October 30 and December 3).

UMD representatives explained that each department was responsible for inspecting their own OWSs. They also stated that there are several grease traps on campus, but they are connected to the sanitary sewer.

Closing Conference

After the campus site walk, the EPA Inspection Team met with UMD representatives for a closing conference and shared preliminary observations. The EPA Inspection Team reiterated that all preliminary observations discussed were not compliance determinations. Any and all preliminary observations shared were subject to further investigation by the EPA Inspection Team upon the additional review of records and documentation. Additional observations may be contained in this inspection report that were not identified at the time of the closing conference after the additional review of materials following the inspection.

The inspection concluded at approximately 1:55 PM (EDT).